



MANAGING NITRATE ON CENTRAL VALLEY DAIRY FARMS

**State Water Resources Control
Board**

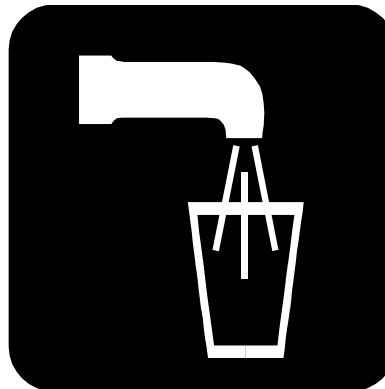
**May 23, 2012
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OVER-ARCHING PRINCIPLES

- *To ensure all people have safe food, safe water, and clean air*
- *Excessive nitrate in the wrong place can be harmful*
- *Adequate nitrogen fertilizers are necessary for crops*
- *No single group or agency can get the job done alone*

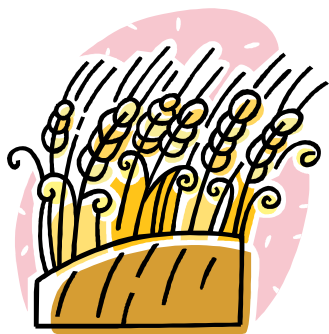
TWO BASIC PARTS TO THE TASK WE FACE

- Nitrogen management on dairies and farms
- Provision of quality water and support for operation and maintenance to communities in need



NITROGEN MANAGEMENT PRESENTS CHALLENGES

- Nitrogen is “slippery” – easily changes forms
- Moves through and between environmental reservoirs with ease
- Our job is clear - keep nitrogen in the crop – and out of the water



HOW IS DAIRY RESPONDING?

- Participated in early research
- Identified nitrate as an issue
- Dairy WDR regulations (2007)
 - Focus on groundwater protection
 - Strict accounting of nitrogen use
- Self-directed efforts to improve facilities and practices



DAIRY WATER REGULATIONS

- Waste Management Plan (WMP)
 - Civil engineer required
 - Adequacy of manure system
- Nutrient Management Plan (NMP)
 - Mandates equivalent of 72% Nitrogen Use Efficiency (NUE)
 - Prepared by NMP specialist
- Production well monitoring (>4,000)
- Defined enforcement process in place

SOPHISTICATED MONITORING AND REPORTING PROGRAM

- Created Central Valley Dairy Representative Monitoring Program
- Intensive groundwater monitoring of clusters of local dairy farms
- Track progress
- Identify effective management practices (BMPs)
- Governed by dairy producers working with regional board staff

GOING FORWARD

- Invest in facilities and equipment to manage nitrogen more effectively
- Continue to invest in additional water quality research
- Expand the utility of manure-based fertilizer materials
 - Technology development
 - Handling systems
- Farming practices will evolve

SUGGESTIONS FOR STATE BOARD TO CONSIDER

- Focus on bringing clean water to small communities ASAP
- Facilitate a means of providing the necessary O&M
- Consider whole system: septic/sewer, other contaminants, scaling
- Elevate the mission



THE MISSION MAY INCLUDE

- Identifying barriers to gaining access to existing funding resources
- Facilitating effective partnerships
- Investigating and encouraging formation of CSD's or JPA's where applicable
- Assisting small communities to move through the regulatory process
- Being accountable for progress

CALIFORNIA DAIRY FAMILIES ARE SERIOUS ABOUT MANAGING FOR CLEAN WATER AND CLEAN AIR

**Let's create the partn
to get it done.**

